

# A NEW LARVAL SPECIES OF *NEOTROMBIDIUM* (ACARIFORMES, ACTINEDIDA: NEOTROMBIDIIDAE) FROM CUBA

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The chigger-like larvae of the genus *Neotrombidium* L e o n a r d i parasitize beetles of the families Cerambycidae, Cleridae, Elateridae and Tenebrionidae. According to the revisions of L i n d q u i s t and V e r c a m m e n - G r a n d j e a n (1971) and S i n g e r (1971) this genus includes 17 species from all continents. Some 9 species are known as larvae (from the USA, Panama, Malaya, India, Australia, f. Czechoslovakia), others as postlarval instars (Angola, Argentina, Paraguay, Indochina, Greece). Neither is known from Cuba.

During my stay in Cuba in 1982 I collected many specimens of a new larval *Neotrombidium*. The family Neotrombidiidae (recognized by some authors, but disputed by S i n g e r, 1971), so far is not known in Cuba.

*Neotrombidium cubanum* sp. n.

**M a t e r i a l:** larvae (holotype and 20 paratypes mounted on slides), found under elytrae of a giant longicorn beetle (Cerambycidae) under bark of a tree near the seashore, Punta Agujas, Prov. Santiago de Cuba, Cuba, 4. 3. 1982, P. Beron leg. Holotype in the collection of the National Museum of Natural History in Sofia, Bulgaria; paratypes in the same Museum and in the collection of the Institute of Zoology, La Habana, Cuba.

**Description of larva:** Ip=1130. Scutum as on fig. 2, punctate. Nasus strongly projected. Dimensions: L=125 µm, W=150 µm. Scutal setae densely barbed. Mean measurements of the holotype (in µm):

AA	AW	PW	SB	ASB	PSB	SD	S	AP	AM	AL	PL	H	D	V
27	73	108	64	57	40	97	68	45	39	38	40	45	40	35

Ocular plates attached to scutum along entire inner edge; diameters: anterior eyes 13 µm, posterior eyes 19 µm.

Body setae pilose.

Sternal setae: fSt=2.0.2, anterior sternal setae free from anterior coxal plates, fCx=1.1.1, Posteroapical angle of anterior and posterior leg coxae ornamented with a reticulate screened porosity (fig. 3), mid coxae not thus ornamented. Uropore absent.

Palpotibial claw long 14 µm.

Legs: fsp=7.6.6

leg I: tr—1B, bf—1B, tf—5B+2 nudes, g—4B+3 nudes, ti—7B+1nude +1 Sol., ta — ca. 19 setae

leg. II: tr—1B, f—6B+2 nudes, g—5 setae, ti—8 setae, ta — ca.13 setae

leg III: tr—1B, f—6B+2 nudes, g—3B+2 nudes, ti—4B+3 nudes (1 trich.), ta—10 setae.

**D i s c u s s i o n.** In their key to the larvae of genus *Neotrombidium* L i n d q u i s t and V e r c a m m e n - G r a n d j e a n (1971) divide the 7 known to them larval species



Fig. 1. Anteroventral side of *N. cubanum*

into 2 groups. They have been completed by Singer (1971). The groups are characterized as follows:

1. No uropore,  $fT=7B$ ; anterior sternal setae free from anterior coxae,  $fSt=2.0.2$ .
2. Uropore present,  $fT=5B.2T$  or  $6B.2T$ . Anterior sternal setae on bases of anterior coxae,  $fSt=0.0.2$ .

*Neotrombidium cubanum* sp.n. falls clearly into the first group together with 3 other american species: *N. anuroporum* Lind. et V.—G., 1971 ("on an adult elaterid beetle *Chalcolepidius silbermanni* Chevrollet, from Taboga Island in the Gulf of Panama"), *N. tricuspidum* Borland, 1956 from "adult cerambycid beetles, *Monochamus carolinensis* (Oliv.)", U.S.A. (Kansas, N. Carolina) and *N. andrei* Singer, 1971, from *Cymatodera peninsularis* Schffr. (Col., Cleridae) from Arizona (U.S.A.). The larvae of the second group are known from Europe, Asia and Australia. The only exceptions are *N. tenebrione* Lind. et Verc.—Grandjean, 1971 and *N. beeri* Singer, 1971, both from the U.S.A. (and conspecific?), but morphologically they are very different from the species of the first group.

The new species differs from *N. anuroporum* Lind. et Verc.—Grandjean by the number and the relative length of leg setae, the relative length of AL, the bigger size ( $Ip=911$  against 1130 of the new species), etc. *N. tricuspidum* Borl. is also smaller than

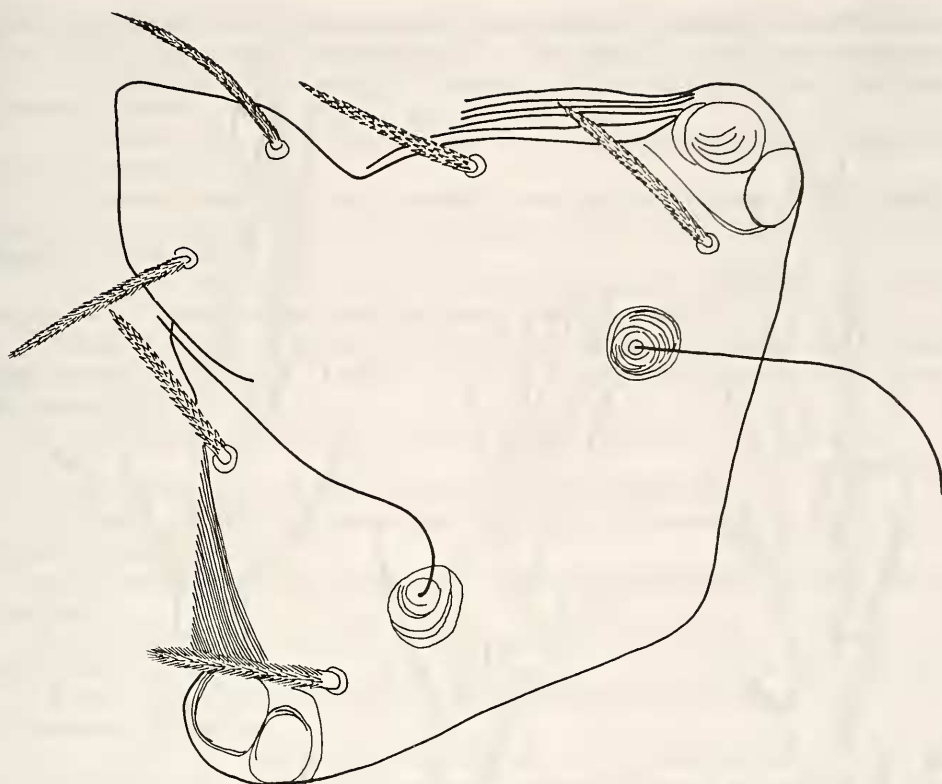


Fig. 2. Scutum of *N. cubanum*

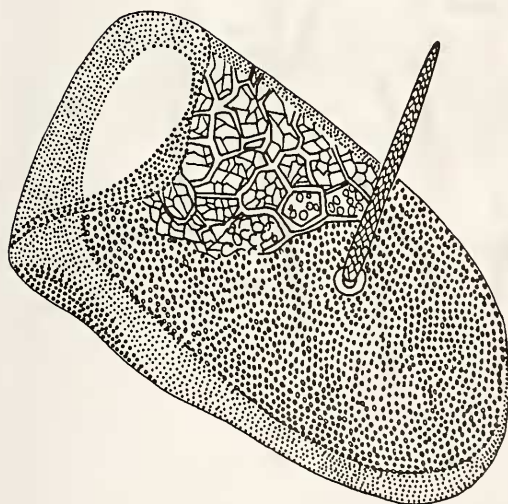


Fig. 3. Coxa III of *N. cubanum*

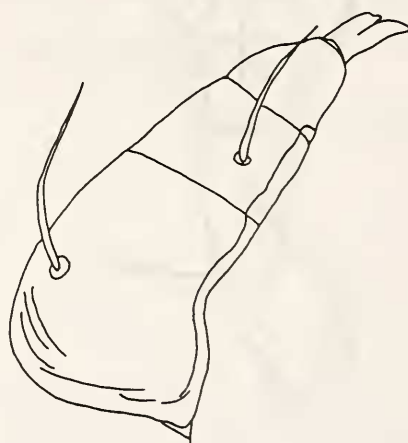


Fig. 4. Palpa dorsal of *N. cubanum*

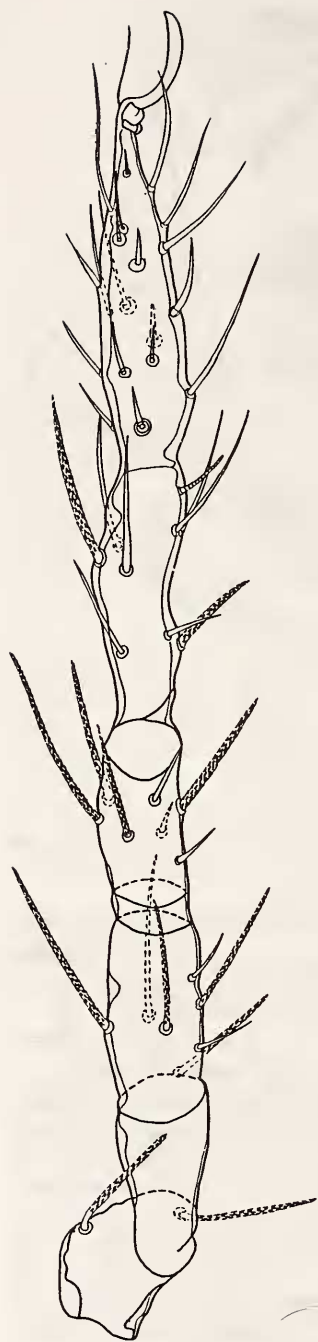


Fig. 5. Leg I of *N. cubanum*

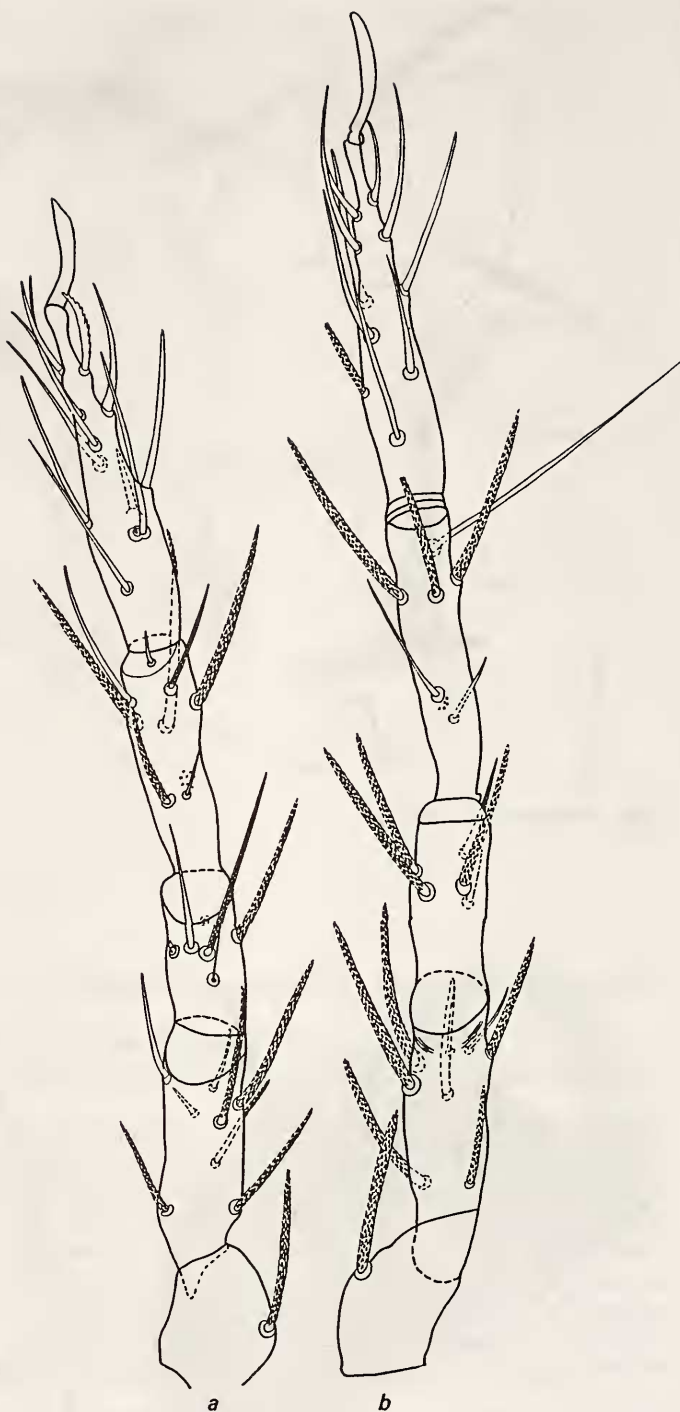


Fig. 6. Leg II (a) and leg III (b) of *N. cubanum*

the new species ( $Ip=844$ ), and has relatively and absolutely shorter AL and PL and different order of leg setae. *N. tricuspdatum* B o r l. has relatively much longer coxal setae.

We find many differences with *N. andrei* S i n g e r. The new species has greater number of ventral setae (at least 17) than *N. andrei* (8).

*N. cubanum* sp.n. differs from all known species also by the peculiar shape of its claws (almost not curved).

With the inclusion of *N. cubanum* and *N. andrei* the key of larvae of *Neotrombidium* published by L i n d q u i s t and V e r c a m m e n - G r a n d j e a n (1971) could be completed as follows.

1. Uropore absent; palpotarsus with terminal setae not differentiated from other setae,  $ft=7B$ ; anterior sternal setae free from anterior coxae,  $fSt=2.0.2$  ..... 2

Uropore present; palpotarsus with terminal setae nude and usually stiff, in distinction to some of other setae,  $fT=5B.2T$  or  $6B.2T$ ; anterior sternal setae on bases of anterior coxae,  $fSt=0.0.2$  ..... 3

2. One long seta on tibia III; short nude seta on genu III ..... *N. cubanum* sp.n.

One long nude seta on genu III; short nude seta on tibia III ..... 4

3. Follow theses for *Neotrombidium tenebrione*, *N. samsinaki*, *N. bengalense*, *N. tenuipes*, *N. barringtonense*.

4. Barbed tibiala on the posterior leg conspicuously long (100—110  $\mu m$ ), reaching the claw ..... 5

No such very long barbed tibiala on the posterior leg; all tibialae shorter than half of the tarsus ..... *N. andrei* S i n g e r

5. Posterior leg with very long, nude genuala and paired femorale, 88  $\mu m$ ; two nude genualae on anterior leg ..... *N. anuroporum* L i n d q u i s t et V e r c a m m e n - G r a n d j e a n

Posterior leg with shorter nude genuala and paired femorale,  $gp=47 \mu m$ ,  $fp=40 \mu m$ ; 3 nude genualae on anterior leg ..... *N. tricuspdatum* B o r l a n d

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# ЕДИН НОВ ЛАРВАЛЕН ВИД ОТ РОД *NEOTROMBIDIUM* (ACARIFORMES, ACTINEDIDA: NEOTROMBIDIIDAE) ОТ КУБА

ПЕТЪР БЕРОН

(Резюме)

Описва се новият вид *Neotrombidium cubanum* sp.n., намерен под елитрите на бръмбар-сечко (Cerambycidae, Col.) по южното крайбрежие на о-в Куба. Това е първият представител на сем. Neotrombidiidae, установен в Куба.